

Package ‘dlr’

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Title Download and Cache Files Safely

Version 1.0.1

Description The goal of dlr is to provide a friendly wrapper around the common pattern of downloading a file if that file does not already exist locally.

License Apache License (>= 2)

Encoding UTF-8

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Config/testthat/edition 3

Imports digest, fs, rappdirs, rlang, utils

URL <https://github.com/macmillancontentscience/dlr>

BugReports <https://github.com/macmillancontentscience/dlr/issues>

VignetteBuilder knitr

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app_cache_dir	<i>Path to an App Cache Directory</i>
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Description

App cache directories can depend on the user's operating system and an overall `R_USER_CACHE_DIR` environment variable. We also respect a per-app option (`appname.dir`), and a per-app environment variable (`APPNAME_CACHE_DIR`). This function returns the path that will be used for a given app's cache.

Usage

```
app_cache_dir(appname)
```

Arguments

appname	Character; the name of the application that will "own" the cache, such as the name of a package.
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Value

The full path to the app's cache directory.

Examples

```
app_cache_dir("myApp")
```

construct_cached_file_path	<i>Construct Cache Path</i>
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Description

Construct the full path to the cached version of a file within a particular app's cache, using the source path of the file to make sure the cache filename is unique.

Usage

```
construct_cached_file_path(source_path, appname, extension = "")
```

Arguments

source_path	Character scalar; the full path to the source file.
appname	Character; the name of the application that will "own" the cache, such as the name of a package.
extension	Character scalar; an optional filename extension.

Value

The full path to the processed version of `source_path` in the app's cache directory.

Examples

```
construct_cached_file_path(  
    source_path = "my/file.txt",  
    appname = "dlr",  
    extension = "rds"  
)
```

`construct_processed_filename`
Construct Processed Filename

Description

Given the path to a file, construct a unique filename using the hash of the path.

Usage

```
construct_processed_filename(source_path, extension = "")
```

Arguments

<code>source_path</code>	Character scalar; the full path to the source file.
<code>extension</code>	Character scalar; an optional filename extension.

Value

A unique filename for a processed version of the file.

Examples

```
construct_processed_filename(  
    source_path = "my/file.txt",  
    extension = "rds"  
)
```

 maybe_cache

Cache a File if Necessary

Description

This function wraps [maybe_process](#), specifying the app's cache directory.

Usage

```
maybe_cache(
  source_path,
  appname,
  filename = construct_processed_filename(source_path),
  process_f = readRDS,
  process_args = NULL,
  write_f = saveRDS,
  write_args = NULL,
  force_process = FALSE
)
```

Arguments

source_path	Character scalar; the path to the raw file. Paths starting with <code>http://</code> , <code>https://</code> , <code>ftp://</code> , or <code>ftps://</code> will be downloaded to a temp file if the processed version is not already available.
appname	Character; the name of the application that will "own" the cache, such as the name of a package.
filename	Character; an optional filename for the cached version of the file. By default, a filename is constructed using construct_processed_filename
process_f	A function or one-sided formula to use to process the source file. <code>source_path</code> will be passed as the first argument to this function. Defaults to <code>read_f</code> .
process_args	An optional list of additional arguments to <code>process_f</code> .
write_f	A function or one-sided formula to use to save the processed file. The processed object will be passed as the first argument to this function, and <code>target_path</code> will be passed as the second argument. Defaults to saveRDS .
write_args	An optional list of additional arguments to <code>write_f</code> .
force_process	A logical scalar indicating whether we should process the source file even if the target already exists. This can be particularly useful if you wish to redownload a file.

Value

The normalized `target_path`.

Examples

```

if (interactive()) {
  target_path <- maybe_cache(
    "https://query.data.world/s/owqxojjiphaypjmlxldsp566lck7co",
    appname = "dlr",
    process_f = read.csv
  )
  target_path

  unlink(target_path)
}

```

maybe_process

Process a File if Necessary

Description

Sometimes you just need to get a processed file to a particular location, without reading the data. For example, you might need to download a lookup table used by various functions in a package, independent of a particular function call that needs the data. This function does the processing if it hasn't already been done.

Usage

```

maybe_process(
  source_path,
  target_path,
  process_f = readRDS,
  process_args = NULL,
  write_f = saveRDS,
  write_args = NULL,
  force_process = FALSE
)

```

Arguments

source_path	Character scalar; the path to the raw file. Paths starting with <code>http://</code> , <code>https://</code> , <code>ftp://</code> , or <code>ftps://</code> will be downloaded to a temp file if the processed version is not already available.
target_path	Character scalar; the path where the processed version of the file should be stored.
process_f	A function or one-sided formula to use to process the source file. <code>source_path</code> will be passed as the first argument to this function. Defaults to <code>read_f</code> .
process_args	An optional list of additional arguments to <code>process_f</code> .
write_f	A function or one-sided formula to use to save the processed file. The processed object will be passed as the first argument to this function, and <code>target_path</code> will be passed as the second argument. Defaults to <code>saveRDS</code> .

`write_args` An optional list of additional arguments to `write_f`.

`force_process` A logical scalar indicating whether we should process the source file even if the target already exists. This can be particularly useful if you wish to redownload a file.

Value

The normalized `target_path`.

Examples

```
if (interactive()) {
  temp_filename <- tempfile()
  maybe_process(
    "https://query.data.world/s/owqxojjiphaypjmlxldsp566lck7co",
    target_path = temp_filename,
    process_f = read.csv
  )

  unlink(temp_filename)
}
```

read_or_cache	<i>Read or Cache a File</i>
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Description

This function wraps [read_or_process](#), specifying an app's cache directory as the target directory.

Usage

```
read_or_cache(
  source_path,
  appname,
  filename = construct_processed_filename(source_path),
  process_f = readRDS,
  process_args = NULL,
  read_f = readRDS,
  read_args = NULL,
  write_f = saveRDS,
  write_args = NULL,
  force_process = FALSE
)
```

Arguments

source_path	Character scalar; the path to the raw file. Paths starting with <code>http://</code> , <code>https://</code> , <code>ftp://</code> , or <code>ftps://</code> will be downloaded to a temp file if the processed version is not already available.
appname	Character; the name of the application that will "own" the cache, such as the name of a package.
filename	Character; an optional filename for the cached version of the file. By default, a filename is constructed using <code>construct_processed_filename</code>
process_f	A function or one-sided formula to use to process the source file. <code>source_path</code> will be passed as the first argument to this function. Defaults to <code>read_f</code> .
process_args	An optional list of additional arguments to <code>process_f</code> .
read_f	A function or one-sided formula to use to read the processed file. <code>target_path</code> will be passed as the first argument to this function. Defaults to <code>readRDS</code> .
read_args	An optional list of additional arguments to <code>read_f</code> .
write_f	A function or one-sided formula to use to save the processed file. The processed object will be passed as the first argument to this function, and <code>target_path</code> will be passed as the second argument. Defaults to <code>saveRDS</code> .
write_args	An optional list of additional arguments to <code>write_f</code> .
force_process	A logical scalar indicating whether we should process the source file even if the target already exists. This can be particularly useful if you wish to redownload a file.

Value

The processed object.

Examples

```
if (interactive()) {
  austin_smoke_free <- read_or_cache(
    "https://query.data.world/s/owqxojjiphaypjmlxldsp566lck7co",
    appname = "dlr",
    process_f = read.csv
  )
  head(austin_smoke_free)
}

if (interactive()) {
  # Calling the function a second time gives the result instantly.
  austin_smoke_free <- read_or_cache(
    "https://query.data.world/s/owqxojjiphaypjmlxldsp566lck7co",
    appname = "dlr",
    process_f = read.csv
  )
  head(austin_smoke_free)
}
```

```

if (interactive()) {
  # Remove the generated file.
  unlink(
    construct_cached_file_path(
      "https://query.data.world/s/owqxojjiphaypjmlxldsp566lck7co"
    )
  )
}

```

read_or_process *Read or Process a File*

Description

Often, a file must be processed before being usable in R. It can be useful to save the processed contents of that file in a standard format, such as RDS, so that the file does not need to be processed the next time it is loaded.

Usage

```

read_or_process(
  source_path,
  target_path,
  process_f = readRDS,
  process_args = NULL,
  read_f = readRDS,
  read_args = NULL,
  write_f = saveRDS,
  write_args = NULL,
  force_process = FALSE
)

```

Arguments

source_path	Character scalar; the path to the raw file. Paths starting with <code>http://</code> , <code>https://</code> , <code>ftp://</code> , or <code>ftps://</code> will be downloaded to a temp file if the processed version is not already available.
target_path	Character scalar; the path where the processed version of the file should be stored.
process_f	A function or one-sided formula to use to process the source file. <code>source_path</code> will be passed as the first argument to this function. Defaults to <code>read_f</code> .
process_args	An optional list of additional arguments to <code>process_f</code> .
read_f	A function or one-sided formula to use to read the processed file. <code>target_path</code> will be passed as the first argument to this function. Defaults to <code>readRDS</code> .
read_args	An optional list of additional arguments to <code>read_f</code> .

write_f	A function or one-sided formula to use to save the processed file. The processed object will be passed as the first argument to this function, and target_path will be passed as the second argument. Defaults to saveRDS .
write_args	An optional list of additional arguments to write_f.
force_process	A logical scalar indicating whether we should process the source file even if the target already exists. This can be particularly useful if you wish to redownload a file.

Value

The processed object.

Examples

```
if (interactive()) {
  temp_filename <- tempfile()
  austin_smoke_free <- read_or_process(
    "https://query.data.world/s/owqxojjiphaypjmlxldsp566lck7co",
    target_path = temp_filename,
    process_f = read.csv
  )
  head(austin_smoke_free)
}

# Calling the function a second time gives the result instantly.
if (interactive()) {
  austin_smoke_free <- read_or_process(
    "https://query.data.world/s/owqxojjiphaypjmlxldsp566lck7co",
    target_path = temp_filename,
    process_f = read.csv
  )
  head(austin_smoke_free)
}

if (interactive()) {
  # Remove the generated file.
  unlink(temp_filename)
}
```

set_app_cache_dir	<i>Set a Cache Directory for an App</i>
-------------------	---

Description

Override the default paths used by [app_cache_dir](#).

Usage

```
set_app_cache_dir(appname, cache_dir = NULL)
```

Arguments

appname	Character; the name of the application that will "own" the cache, such as the name of a package.
cache_dir	Character scalar; a path to a cache directory.

Value

A normalized path to a cache directory. The directory is created if the user has write access and the directory does not exist. An option is also set so future calls to [app_cache_dir](#) will respect the change.

Examples

```
# Executing this function creates a cache directory.  
set_app_cache_dir(appname = "d1r", cache_dir = "/my/cache/path")
```

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